

ATTITUDE AND USAGE OF ARTIFICIAL INTELLIGENCE ON THE ACADEMIC PERFORMANCE OF BEED STUDENTS

John Paul Bervegal Manzan¹, Desiree Mae Guisihan Decinilla², Markjil Veriña Hortilano³, Daniela Jean Abrio Quita⁴, Jezzalyn Pasos Pepito⁵, Maricel Medecilo Gonzales, PhD⁶

Don Carlos Polytechnic College, Purok 2, Población Norte, Don Carlos, Bukidnon 8712, Philippines

ABSTRACT

This study determined the attitude and usage of Artificial Intelligence (AI) and its relationship to the academic performance of Bachelor of Elementary Education (BEED) students at Don Carlos Polytechnic College (DCPC), Don Carlos, Bukidnon. It specifically examined students' attitude toward AI, their level of AI use, their academic performance, and the relationship among these variables. The study used a descriptive-correlational design and involved 226 first-year BEED students selected through simple random sampling during School Year 2025–2026. Data were gathered through an adopted questionnaire from Schepman and Rodway (2022) and Grajeda et al. (2023). Students' General Weighted Average for the first semester of SY 2025–2026 was used as the measure of academic performance. Weighted mean and Pearson's correlation coefficient at the 0.05 level of significance were used in data analysis.

Findings revealed that in term of their attitude towards artificial intelligence, students have a balanced view of AI, appreciating its benefits while still remaining careful about its risks. And in terms of their use of artificial intelligence, it was found out that students are able to use AI in a functional and beneficial way in their learning activities. Their academic performance was generally favourable, as mostly of them falls under the Good and Very Good level. Correlation results showed that both attitude toward AI and use of AI had strong positive and statistically significant relationships with academic performance. This means that students who use AI more effectively are more likely to achieve better academic results. It is recommended that teachers and school administrators strengthen students' AI literacy through guidance, seminars, and responsible use policies to maximize its educational benefits while maintaining ethical and effective academic practices.

Keyword: Artificial intelligence, Attitude, Use, Academic Performance, Student

1.INTRODUCTION

In the field of education, Artificial Intelligence (AI) emerged as a powerful tool that supported both teaching and learning processes. Students increasingly used AI-based applications for academic purposes, including researching topics, summarizing learning materials, solving problems, and improving writing skills (Bettayeb et al., 2024). Students' attitudes toward AI and their patterns of AI usage played a crucial role in determining its influence on academic performance. Attitude toward AI referred to students' beliefs, perceptions, and overall disposition toward integrating AI tools into their learning processes (Garzon et al., 2025), while AI usage referred to the extent and manner in which

students employed AI tools for academic activities such as information retrieval, content generation, problem-solving, and study support (Bettayeb et al., 2024).

Despite the widespread use of AI, researchers and educators expressed concerns regarding its potential impact on students' academic performance, particularly in relation to ethical issues, accuracy of outputs, and the development of higher-order thinking skills (Lund et al., 2025). Evidence of this growing reliance on AI was reflected in the 2024 Global AI Student Survey. Similarly, in the Philippines, the adoption of AI-powered tools, particularly generative AI, reached approximately 48–49% nationwide, according to TrueLogic DX. Moreover, a survey conducted by

the American Association of Colleges and Universities showed that AI use reduced students' critical thinking skills, shortened attention span, increased cheating, and raised academic integrity concerns. Thus, affecting their academic performance. Both faculty and students noted that improper AI use often promoted academic shortcuts rather than meaningful understanding of course content.

By identifying how students' attitudes and usage of AI related to their academic performance, this study sought to provide empirical evidence that could inform educators, administrators, and policymakers in developing strategies, policies, and instructional practices that promoted responsible AI integration in teacher education. Ultimately, this research aimed to ensure that artificial intelligence served as a supportive tool that enhanced, rather than undermined, the academic performance and professional preparation of future elementary teachers.

Given these opportunities and challenges, students' attitudes toward artificial intelligence and their usage of AI played a crucial role in determining its educational impact. Research indicated that students who held positive attitudes toward AI demonstrated higher engagement and improved AI literacy, which were associated with better academic outcomes (De Leon et al., 2025). In contrast, students with negative attitudes toward AI experienced anxiety, resistance to technology use and applying AI tools, which limited their engagement and reduced the academic benefits of AI-supported learning (Lund et al., 2025). In terms of usage, studies suggested that frequent and purposeful use of AI for learning-related tasks enhanced students' effectiveness and proficiency in completing academic requirements (Lund et al., 2025). Effective AI usage contributed positively to academic performance (Becirovic et al., 2025). Moreover, students who used AI proficiently demonstrated deeper understanding and stronger academic achievement (Garzon et al., 2025). Thus, both attitude and usage of AI played a significant role in shaping students' academic performance.

In light of these considerations, this study sought to examine the growing integration of artificial intelligence in higher education and its impact on students' academic performance, particularly among future educators. Specifically, it aimed to

determine the level of BEED students' attitudes toward AI, assess their extent of AI usage, evaluate their academic performance, and examine the relationships among these variables.

This study was conducted among first-year Bachelor of Elementary Education (BEED) students at Don Carlos Polytechnic College during the School Year 2025–2026. The research was conducted from January to May 2026, covering data collection, analysis, and interpretation within the specified timeframe to ensure timely and relevant findings.

1.1 Statement of the Problem

This study aimed to determine the attitude and usage of artificial intelligence on the academic performance of BEED students in Don Carlos Polytechnic College, Don Carlos, Bukidnon.

Specifically, it sought to answer the following questions:

1. What is the level of attitude of students towards artificial intelligence in terms of:
 - a. positive attitude; and
 - b. negative attitude?
2. What is the level of use of artificial intelligence among students in terms of:
 - a. effectiveness; and
 - b. proficiency?
3. What is the level of academic performance of students?
4. Is there a significant relationship between the attitude and the academic performance of BEED students?
5. Is there a significant relationship between the use of artificial intelligence and the academic performance of BEED students?

1.2 Hypothesis of the Study

To determine the variables that correlate with the academic performance of students, which serves as the dependent variable in this study, the following hypotheses were formulated at the 0.05 level of significance:

Ha1: There is a significant relationship between the attitudes and the academic performance of BEED students.

Ha2: There is a significant relationship between the use of artificial intelligence and the academic performance of BEED students.

2.METHODOLOGY

This section presents the study's research methodology. It includes the research design, study locale, map of the locale, study respondents, sampling procedure, research instruments, instrument administration, scoring procedure, ethical considerations, data-gathering procedure, and statistical treatment.

2.1 Research Design

This study employed a descriptive-correlational research design. The descriptive method was used to determine the level of students' attitudes toward artificial intelligence, their level of AI usage in academic activities, and their level of academic performance. The correlational method was utilized to examine the relationship between students' attitudes toward artificial intelligence, their usage of AI tools, and their academic performance. This design was deemed appropriate because the study sought to describe existing conditions and determine relationships among variables without manipulating them.

2.2 Locale of the Study

The study was conducted at Don Carlos Polytechnic College (DCPC), a local public tertiary institution situated in the municipality of Don Carlos, Bukidnon, Philippines. Don Carlos Polytechnic College offered various undergraduate programs, including Teacher Education and Criminology.

The campus occupied a land area provided by the Local Government of Don Carlos and was geographically located at approximately 7.68788° North latitude and 125.0004° East longitude. Its strategic location made it accessible to students from the municipality of Don Carlos and nearby municipalities in Bukidnon.

2.3 Sampling Procedure

The sample size of the respondents was determined using Slovin's Formula, which is expressed as:

Where:

n = sample size

N = total population

e = margin of error (0.05)

The total population is 518, using Slovin's formula with a 5% margin of error, the total sample size is 226 respondents. After the required sample size was determined, simple random sampling was employed to select the respondents. This method ensures that each first-year BEED student has an equal chance of being included in the study, thereby minimizing sampling bias and enhancing the representativeness of the sample.

2.4 Research Instrument

The level of attitude towards AI was measured using an adopted instrument General Attitudes towards Artificial Intelligence Scale (GAAIS) Questionnaire developed by Schepman & Rodway (2022). It consists of two components: positive attitude towards AI and negative attitude towards AI, with seventeen (17) items each dimension. The instrument has a Cronbach's alpha of 0.88, indicating high reliability and internal consistency. Responses are measured using a 5-point Likert scale, where 5 represents Strongly Agree, 4 represents Agree, 3 represents Neutral, 2 represents Disagree, and 1 represents Strongly Disagree.

The level of usage of AI was measured using an adopted instrument Student-Perceived Impact of Using Artificial Intelligence Survey Questionnaire developed by Grajeda et al., (2023). This survey questionnaire consists of two components: effectiveness of using AI tools, with nine (9) items, and proficiency of using AI, with six (6) items. The instrument has a Cronbach's alpha of 0.91, indicating that it is a reliable tool for assessing students' self-reported usage, effectiveness, and proficiency in AI tools. Responses are measured using a 5-point Likert scale, where 5 represents Strongly Agree, 4 represents Agree, 3 represents Neutral, 2 represents Disagree, and 1 represents Strongly Disagree.

Academic performance was measured using the students' General Weighted Average (GWA) for the First Semester of School Year 2025–2026. The GWA was obtained from respondents only with their willingness and approval, in line with data privacy and ethical standards, and was interpreted using the grading scale in the DCPC Students Handbook. This served as an objective indicator of students' academic achievement and overall performance.

2.5 Scoring Procedure

The data collected from the administered questionnaires were scored systematically using a five-point Likert scale. Each item in the instrument was assigned a numerical value corresponding to the respondents' selected answer.

To interpret the level of attitude toward artificial intelligence and level usage of artificial intelligence, the weighted mean of each indicator was computed and interpreted using the scale below:

Level of Attitude Towards AI and Level of Use of AI

Scale	Range	Descriptive Rating	Qualitative Interpretation
5	4.21 – 5.0	Strongly Agree	Very High
4	3.41 – 4.20	Agree	High
3	2.61 – 3.40	Neutral	Moderate
2	1.81 – 2.60	Disagree	Low
1	1.00 – 1.80	Strongly Disagree	Very Low

To measure the academic performance of the BEED students of DCPC, the scale below was used for the interpretation of the data:

Level of Students' Academic Performance

Grading Scale	Percentage Equivalent	Description
1.00	98-100	Excellent
1.25-1.50	95-94	Very Good
1.75-2.25	88-82	Good
2.50-2.75	80-76	Fair
3.00	75	Pass

2.6 Ethical Considerations

This study was conducted in accordance with established ethical principles. Prior to data collection, informed consent was obtained from all respondents, clearly explaining the purpose of the study, the research procedures, and any potential risks and benefits of participation. Respondents were assured of their anonymity and the confidentiality of their responses, and they were

informed of their right to withdraw from the study at any time without penalty. Appropriate measures were implemented to minimize potential harm or distress, and all sensitive information was securely handled and stored in compliance with relevant data protection regulations. Throughout the conduct of the study, ethical considerations remained a central focus, guided by the core principles of beneficence, non-maleficence, justice, and respect for persons.

2.7 Data Gathering Procedure

Prior to data collection, a formal request for permission to conduct the study was submitted to the School President and the Dean of the Bachelor of Teacher Education of Don Carlos Polytechnic College. Upon approval, coordination was undertaken with the block representatives to facilitate the administration of the research instruments.

The respondents were informed of the objectives and nature of the study, and informed consent was obtained prior to their participation. They were assured that all information provided would be treated with strict confidentiality and would be utilized solely for academic and research purposes. Participation in the study was entirely voluntary, and respondents were informed of their right to withdraw from the study at any stage without any penalty.

The research questionnaire was administered to the selected respondents at a scheduled time agreed upon with the instructors to minimize disruption of regular class activities. Clear and standardized instructions were provided to ensure accurate and honest responses, and sufficient time was allotted for the completion of the questionnaires.

After the retrieval of the accomplished questionnaires, the collected data were systematically organized, coded, and prepared for statistical analysis to determine the levels of attitude toward AI, usage of AI, academic performance, and the relationships among these variables.

2.8 Statistical Treatment

Descriptive measures such as weighted mean, frequency, and percentage were used on determining the level of attitude towards AI, level

of usage of AI, and level of academic performances among BEED students. Pearson's correlation coefficient was utilized to test the relationships between variables through the utilization of Statistical Package for Social Sciences (SPSS). A p-value of equal to or less than 0.05 was considered statistically significant.

3.RESULTS AND DISCUSSIONS

3.1 Attitude of Students Towards Artificial Intelligence

Table 1 presents the summary of the mean scores on the attitude of students towards artificial intelligence. The overall mean is 3.06, described as Neutral with a Moderate qualitative interpretation, indicating that students have a generally balanced attitude toward artificial intelligence, with no strong leaning toward either full acceptance or rejection.

Table 1. Summary of mean scores on the attitude of students towards artificial intelligence

Variables	Mean	Descriptive Interpretation	Qualitative Interpretation
Positive Attitude towards Artificial Intelligence	3.49	Agree	High
Negative Attitude towards Artificial Intelligence	3.37	Neutral	Moderate
Overall Mean	3.06	Neutral	Moderate

The table 1 shows that Positive Attitude towards Artificial Intelligence was rated Agree with a High qualitative interpretation (M = 3.49) and Negative Attitude toward Artificial Intelligence was rated Neutral with Moderate qualitative interpretation (M = 3.37). The overall mean of 3.06, interpreted as Neutral and qualitatively Moderate, indicates that students are generally aware of the benefits of AI, but their overall stance remains cautious and moderate. This shows that they tend to recognize AI's usefulness while still keeping some reservations about its risks. Meanwhile, the moderate negative attitude suggests that concerns about AI are present but not dominant. This pattern suggests that students accept AI in a limited and careful way rather than with complete confidence or

resistance. Overall, the results reflect a measured and balanced view of artificial intelligence.

The findings imply that students are open to AI, especially when it is used as a helpful tool in education and daily life. Since the positive attitude mean is higher than the negative attitude mean, it suggests that students are more inclined to appreciate AI than to oppose it. The fact that the negative attitude remains only moderate indicates that their concerns do not outweigh their recognition of AI's advantages. At the same time, the slightly lower mean for overall attitude may suggest that students are still undecided about the full extent of AI's role in their lives. In practical terms, the table indicates that AI is generally accepted by students, but its use should continue to be guided by responsible and ethical practices.

These findings are supported by Petricini et al.'s (2023) study, in which students and faculty have mixed opinions on AI. However, the findings of this study demonstrate a level of familiarity with AI. Moreover, in a similar study by Horowitz et al. (2024), familiarity with AI comes together with trust to fully utilize it. However, there are certain aspects of AI that society must explore. Similarly, students in Spain pursuing studies in economics, business management, and education demonstrated awareness of the influence of artificial intelligence. They expressed a willingness to enhance their educational pursuits in this area, even though their current understanding may be somewhat limited (Almaraz-López et al., 2023). Chiu et al. (2023) reported that although AI is generally viewed positively, users still express caution about ethical issues, reliability, and dependence on automated systems. These studies support the present findings that students hold a generally positive but cautious attitude toward artificial intelligence.

3.2 Use of Artificial Intelligence Among Students

Table 2 presents the summary of the mean scores on the use of artificial intelligence among students. The overall mean is 3.53, described as Agree with a High qualitative interpretation, indicating that students generally use artificial intelligence effectively and with a relatively high level of skill in their academic tasks.

Table 2. Summary of mean scores on the use of artificial intelligence among students

Variables	Mean	Descriptive Interpretation	Qualitative Interpretation
Effectiveness	3.58	Agree	High
Proficiency	3.49	Agree	High
Overall Mean	3.53	Agree	High

The table 2 shows that Effectiveness was rated Agree with a High qualitative interpretation (M = 3.58) and Proficiency was also rated Agree with a High qualitative interpretation (M = 3.49). The overall mean of 3.53, interpreted as Agree with a High qualitative interpretation, indicates that students perceive AI as a useful and manageable tool in their learning activities. This shows that they are not only able to use AI tools successfully, but also find them beneficial in supporting academic work. Meanwhile, the slightly higher mean for effectiveness than for proficiency suggests that students see AI as more useful in accomplishing tasks than in demonstrating advanced mastery. This pattern suggests that students are confident in using AI for practical academic purposes, even if their competence is still developing in more specialized applications. Overall, the results reflect a generally positive and functional level of AI use among students.

The findings imply that students are becoming more accustomed to AI as part of their learning process. Since the mean scores for both effectiveness and proficiency fall within the High range, it suggests that students are capable of using AI tools in ways that support their academic performance. The fact that both dimensions were rated positively indicates that AI is not merely available to students but is also being used with reasonable confidence and usefulness. In practical terms, the table indicates that students are likely to benefit from continued exposure, guidance, and training in AI use to further strengthen their skills and maximize its educational value.

These findings are supported by De Leon et al., (2025) which have noted that AI tools help students better understand course content, search for information more efficiently, and complete tasks more effectively. Similarly, the study of Pelegriño et al., (2025) shows that students who use AI regularly tend to develop stronger familiarity and confidence in applying it to

schoolwork. In addition, Feigerlova et al., (2025) suggest that AI-supported learning can improve academic outcomes when used appropriately and consistently. These studies support the present findings that students demonstrate a generally high level of effectiveness and proficiency in using artificial intelligence.

3.3 Academic Performance of BEED Students

Table 3 presents the academic performance of BEED students using the given grading scale. The table shows that most learners belonged to the 1.75-2.25 bracket, described as Good, while a smaller number fell within the 1.25-1.50 range, interpreted as Very Good, and a few were in the 2.50-2.75 bracket, described as Fair. The table also reports an overall mean of 1.60, that falls into the descriptive interpretation of Good.

Table 3. Academic performance of BEED students

Grading Scale	Frequency	Percentage	Descriptive Interpretation
1.00	0	0	Excellent
1.25 - 1.50	102	45	Very Good
1.75 - 2.25	121	54	Good
2.50 - 2.75	3	1	Fair
3.00	0	0	Pass
Total = 226		Mean = 1.60	Good

As reflected in Table 3, 102 students were in the Very Good level, 121 students were in the Good level, and 3 students were in the Fair level, for a total of 226 learners. The table shows that the academic performance of BEED students was generally favorable and concentrated in the Good to Very Good range. The concentration of learners in the Good category (54%) indicates that most of the respondents were performing at an above-average academic level. The mean score of 1.60 further supports this pattern, showing that overall performance was Good.

The absence of learners in the Pass categories also suggests that none of the respondents performed at a low academic level during the period covered by the data. This pattern reflects a generally favorable academic standing among the students and may indicate that the group had sufficient academic preparedness, consistent study habits, and effective learning support. Research has shown that regular use of effective learning

strategies and academic support systems can improve academic performance.

The findings revealed that the BEED students demonstrated strong academic achievement, with most of them clustered in the upper performance categories. A performance profile dominated by Very Good and Good ratings may suggest that the majority of students were able to meet or exceed the expected academic standards. In the context of a study on artificial intelligence, this may also imply that students' academic success may be associated with their ability to use learning tools and resources effectively. At the same time, the presence of a small number of learners in the Fair category indicates that a few students may still need additional academic support or intervention.

These findings aligned with Brillantes and Fausto (2023), who reported that students generally demonstrated good academic performance due to student engagement and effective study habits that contributes to stronger academic outcomes, and this may also be supported by students' use of artificial intelligence as a learning aid. Learning support, access to resources, and consistent academic effort were also identified as important factors that positively affect students' performance, which suggests that AI tools may further enhance these outcomes when used appropriately. Other studies further stressed that students who engaged consistently with AI tools for writing assistance, problem-solving exercises, and adaptive learning demonstrated improvements in their GWA and academic ratings (Roquero et al., 2025). These studies support the present finding that the students exhibited generally favorable academic performance, which may be reinforced by their ability to use AI effectively in academic tasks.

3.4 Relationship Between the Level of Attitude of Students Towards Artificial Intelligence and Their Academic Performance

Table 4 presents the correlation between the level of attitude of students towards artificial intelligence and their academic performance. The table includes the overall mean on the attitude of students towards artificial intelligence and the corresponding correlation the and p-value. It showed that it is statistically significant with academic performance, with a correlation coefficient of $r = 0.811$ and a p-value of 0.01, which

is significant at $p < 0.05$. These results indicate that students' attitudes toward artificial intelligence are strongly and positively associated with their academic performance, meaning that more favorable attitudes tend to correspond with better academic outcomes.

Table 4. Correlation between the level of attitude of students towards artificial intelligence and their academic performance

Variable	Correlation Coefficient ®	P-Value	Interpretation
Attitude towards Artificial Intelligence	0.811	0.01**	Significant

** $p < 0.05$

The results show that the relationship between students' attitude toward AI and academic performance is strong, positive, and statistically significant. The correlation is very high. This pattern suggests that students who view AI more positively are also more likely to perform better academically.

The findings imply that attitude toward AI may play an important role in shaping students' academic success. In practical terms, the results highlight the value of promoting positive and responsible attitudes toward AI use among students, since this may contribute to improved learning outcomes and performance.

These findings are supported by recent studies showing that students' attitudes toward artificial intelligence are positively associated with learning engagement and academic outcomes. Liang and Reiss (2025) found a significant positive correlation between students' attitudes toward AI and their learning engagement, with favorable attitudes linked to greater autonomy and enjoyment in learning. Similarly, Pallant et al. (2025) reported that students with more positive attitudes toward AI also demonstrated stronger learning outcomes, indicating that favorable perceptions of AI may contribute to better academic performance. In addition, Chen and Cheung (2025) reported that generative AI has a significant positive impact on university students' learning outcomes, particularly in academic achievement and motivation.

3.5 Relationship Between the Level of Use of Artificial Intelligence and Students' Academic Performance

Table 5 presents the correlation between the level of use of artificial intelligence and students' academic performance. The table includes the overall mean on the use of artificial intelligence and the corresponding correlation and p-value. It showed that it is statistically significant with academic performance, with a correlation coefficient of $r = 0.812$ and a p-value of 0.01, which is significant at $p < 0.05$. These results indicate that students who use AI more effectively are more likely to achieve better academic results.

Table 5. Correlation between the level of use of artificial intelligence and students' academic performance.

Variable	Correlation Coefficient ®	P-Value	Interpretation
Use of Artificial Intelligence	.812	0.01**	Significant

** $p < 0.05$

The results show that students' use of artificial intelligence is strongly and positively associated with their academic performance. The correlation is very strong. The p-value of 0.01 shows that the relationship is statistically significant. This pattern suggests that students who use AI more effectively tend to perform better academically.

The findings imply that AI use may contribute to improved academic outcomes when it is applied appropriately and consistently. In practical terms, the results highlight the importance of encouraging responsible and effective AI use to support student learning and performance.

These findings aligned with recent studies on AI in education by Ahmed et al. (2025), found that students who use AI tools for learning support tend to achieve stronger academic outcomes. Moreover, students who used AI tools responsibly seemed to convert their engagement into genuine understanding rather than relying on superficial shortcuts. This contributes to the expanding body of literature that underscores the connection between ethics and academic success. Almassaad et al. (2024), noted that responsible adoption of AI is crucial for its sustainable integration into education and that schools shall incorporate AI literacy into their curricula and advocate for the

ethical, critical, and pedagogically sound application of AI tools to promote substantial learning outcomes. These studies support the present finding that students' use of artificial intelligence is linked to better academic performance when the tools are used effectively and ethically.

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